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General Articles

"A SCHEME TO INITIATE ASSISTANCE IN CLINICAL WORK"*

I.—A. W. NOEL PILLERS, F.R.C.V.S.

The Council of this Association has for some years paid considerable attention to the welfare of the general practitioner. Recently a guide to the diagnosis of lightning stroke was circulated and, it is hoped, reached those in need. The way this subject has been handled in the past has not enhanced our reputations. Some years ago, through the Northern Branch of the National Veterinary Medical Association, arrangements were made for bacteriological, chemical, botanical and parasitological diagnosis. It is now felt that changes are coming rather rapidly and that more effort ought to be made to cope with what is virtually a new state of affairs. Colleges do not and cannot very well train us how to furnish a surgery and consulting room so that they draw clients; neither do they teach order and system in book-keeping and card-index systems; nor do they instruct us how to handle clients.

Ours is a peculiar calling; its principles are imbibed under professorial guidance, and then we go out into the world to meet conditions very similar to those of any trade, save that we are hemmed in by numerous conventions which many disregard, sometimes with pecuniary benefit to themselves and often with great damage to the so-called profession. Some of the troubles of to-day are not due directly to our own faults. Such an one is the decline of horse practice. But many can certainly be laid at our own doors. It is to these sins of commission and omission that the Council wish to draw your attention this afternoon, in the hope that instead of vituperation of a natural evolutionary process which has happened in most professions, we may draw up something helpful and constructive. For this purpose I, a whole-time officer who, according to report, has long leisure, have been chosen to start the discussion. I understand that I am to be followed by a general practitioner who has so conducted his practice that he has been retired for some years whilst in the prime of life. I hope that, between us, we shall at least interest you.

I think the first point to be brought out is "service." By premises, method, knowledge and results a service must be created which cannot be got elsewhere. Moreover, the man who gives the best service will have the best income. Service must come first and reward afterwards. The man who weighs up how much the owner can pay before he starts on a lacerated wound and proceeds accordingly is in the wrong job. The bad must be taken with the good. If one says "Let the poultry instructor do the tuberculin testing—it does not pay me," then, of course, there must be no grumbling when he starts on cattle. The same applies to many other aspects of our work, such as dietetics, insect pests, fish diseases and maladies of bees. It is to be hoped that in the future we may be able to render better service.

It is assumed that you have rooms and premises which leave little to be desired, that a microscope and small up-to-date library are yours, and that you are prepared to regard any sick animal save man as your rightful patient. What, then, can this Association do to help you? Would a small but efficient library be of any use? If too many of the text-books are in French or German can we run classes in these languages for you? Or would you like a library, as it were, of instruments for circulation? The molar cutters of the Association are very well used. We want answers to these and other questions. I would put forward, in the first place, a general suggestion that the Association should buy certain instruments of precision and books (second-hand, if possible and suitable) and lend them out to volunteer members provided they keep them in repair, read papers within a year or so and promise to help other members at nominal rates at their own premises. I propose to take a few examples in a random manner where I think such might be done with advantage to us all. Some of them will hardly fit in with the general theme and will require somewhat special treatment.

(1) *Infective Feline Gastro-enteritis.*—What would not practitioners who do much cat work give for a satisfactory method of preventive inoculation for this disease? We know that Urbain, Lassabliere and Vaignier have prepared such a vaccine ("Sur l'immunisation des Chats contre la Gastro-entérite infectieuse par un Vaccin Formale," *C. R. Soc. Biol*, Paris, 112, pp. 247-249, 1933). Could we not get a laboratory worker on to this?

* Papers presented in opening a discussion on this subject at a special meeting of the Lancashire Veterinary Medical Association (Division, N.V.M.A.), held at Manchester, December 15th, 1933.

(2) *Uterine Disease.*—What could be more helpful than to have a good look round in the interior of the cow's vagina, cervix and uterus or, for that matter, the same organs in any of our animals? Küst, in the *Tierärztl. Rdsch.*, pp. 17-21 and 36-8, 1933, in "Die Behandlung der erkränkter Gebarmutter des Rindes," describes long metal tubes with rods on which are illuminators operated by dry batteries, which he has used successfully for this purpose.

(3) *The Bronchoscope.*—Whether we use this term, or œsophagoscope or gastroscope, depends chiefly on the organ into which the instrument is placed. There is little doubt that such an instrument is almost an essential to any extensive dog practice. By it can be diagnosed a number of conditions of the bronchi, the œsophagus and the stomach, which cannot be detected in any other way. In obstruction by non-opaque bodies or decalcified bones, it supersedes X-rays. It is the only hope of removal in many cases of foreign body in the trachea and in the œsophagus beyond the heart. Its extended use would speed up diagnosis and treatment. Chevalier Jackson's book on this subject is a delight to read, and any of you who have seen a specialist in human bronchoscopy at work on our patients must have felt thrilled and at the same time not a little ashamed. I think such an instrument in skilled hands is an urgent need of this Association.

The rhino-laryngoscope is a different instrument altogether and is, as far as I know, only used to any extent in the case of roaring and whistling horses.

(4) *Diseases of the Eye.*—I take it you will all agree with me that, with the exception of one or two superficial conditions, it is impossible to get any information of value from an examination of the eye, without an ophthalmoscope. An illustrated atlas of the abnormal pictures as revealed by this instrument is badly wanted for at least the dog and horse. A suitable instrument and text-book seem to me the first step in order to get one of our members with artistic tastes interested.

(5) *Radiology.*—It is unnecessary to point out the value of X-ray in diagnosing the presence of fractures, dislocations, bone conditions and foreign bodies, or in excluding them. But, as you know, there are several other spheres where it is of the greatest possible use when opaque substances are either given or injected. Can we persuade one of our members to take up this subject and help himself and colleagues? I estimate that we could get a small second-hand outfit which would be within the scope of this Association's purse. There are now suitable text-books on the subject in most languages save our own.

(6) *Psychoses and Neuroses.*—These require considerable study before we can feel at all safe in expressing opinions on them. Our colleagues abroad have done quite a lot of work on them and I think that it ought to be possible to get a great deal of information from recognised human standard works on the normal and abnormal, and this would be of real value to us.

(7) There are many other aspects which will appeal to other members, which may be just as suitable for treatment under such a scheme. There is the electric cardiograph, sphygmomanometer, urine analysis, and so on, but I have said enough and must leave the rest for my co-opener.

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II.—E. H. CURBISHLEY, M.R.C.V.S.

Just why I have been asked to "stage a come-back" by giving opinions upon this subject, I do not know, because practice as I knew it and as it is to-day are widely different matters. Apart altogether from the supercession of the horse by motors, natural evolution enters into the question and advances and developments continue as science proceeds with the unravelling of the many secrets of nature—and veterinary practitioners, in common with those of every other profession, can only hope to keep abreast of their time by continuous study and the adoption of every new process both in medicine and surgery as they arise.

I presume that each one of us must sorrowfully admit that the effects of the great and world-wide depression have made themselves felt individually because, whilst our employers suffer, we too must share the general shortage of funds—and whilst the means and ways to a quick recovery seem to baffle the experts, we must wait with what patience we may the return of the national prosperity which is now predicted; meanwhile, we can at least adopt the methods of good tradesmen by overhauling our stocks, discarding all that is soiled or out-of-date, and arranging for a bright, thoroughly modern and completely efficient service.

How great the forward strides of this comparatively young profession really are, may perhaps be brought more clearly to your minds if I say that within my own experience I can remember stock keepers and others bemoaning the fact that we were a reactionary and futile body because we had ceased to practise indiscriminate phlebotomy, and record that when I first went on my pupilage the clinical thermometer was unknown, treatment of open wounds was by the sewing in of pledgets of tow soaked in turpentine and oil to induce a free flow of laudable pus, and the mustard can was an indispensable adjunct to the seton in what were termed "chest affections." All this goes to prove the truth of the aphorism, "Nothing is constant in this world except change"— and yet

whilst this is true of conditions, surroundings and personnel, we have Euclid's reminder that the angles at the base of an isoceles triangle are for ever equal, and in the same way basic principles and first causes must remain the same.

What brought our profession into being? Surely, the following: first and most important, the relief of animal suffering and the provision of comfort, safety and well-being for all dumb creatures in distress; second, the safeguarding of the owners' interest, and third, the means of livelihood to practitioners.

These, I take it, form our triangle and always must do so, but our vindication and success will depend upon our whole-hearted and conscientious observance of the first, and unless we fit ourselves to preserve the lives committed to our care by the use of every available means, we fail in our high calling and are unworthy members of a noble profession—just as we are if what we do is done solely for monetary gain and unless our watchword is "efficiency."

Speaking of the second, we should, of course, do all possible to gain and retain the confidence and respect of clients—but daring, if occasion arises, to say "I do not know" and never making a statement which we would not be prepared to swear to or which we could not prove; by these means we should provide grounds, as needed, for requesting the help of pathologists and other specialists, because teamwork is a necessity in many cases: but I hope as time goes on and these gentlemen realise that "in the field" we are required to say definitely "this is or is not," they also will cultivate the habit of giving us clear-cut and definite statements—without ambiguous reservations—especially in written communications, sight of which is often expected by clients.

The question then arises: Is some scheme required to help the general practitioner? Personally, I think it is, because for many, and especially those who have been qualified the longest, and who have not had the advantage of taking the D.V.S.M. or other post-graduate course (as was my own misfortune), and whose free time is limited by the demands of practice, there must be very much which they have not had time to study; whilst for the young graduate there is not now a sufficiency of horse practice to afford experience, although their elders have great stores of knowledge if only the juniors could come by it—could some interchange not be arranged? In this connection I should like to borrow the "motto" used by the musical festivals: "Competitors are not rivals but comrades pacing one another on the road to perfection."

The younger men have certainly had the advantage in being grounded in small animal surgery, but, on their own admission, there are at least some of our members who have never undertaken, say, even the simplest of laparotomies or such-like operations on a small animal and who, rather than admit inability, will attempt to persuade an owner that it is not worth while or is generally fatal, and so on. To use a business man's maxim, "The satisfaction of the customer is the safety of the merchant,"—and it cannot be obtained by these means. As part of a scheme, therefore, I should like to suggest a few points for discussion:—

(1) That we circulate to all members the names of others who have specialised and who would be willing to undertake any surgical case in either large or small animals. We ought to miss no opportunity of operating on suitable cases—seeking help, until competent to undertake the work personally.

(2) That we form an Advisory Board (such as the Council of this Association) to meet at stated times and places to confer with and advise—either personally or by letter—any members to whom such help would be acceptable; or, if thought fit, to arrange for consultations in serious or troublesome cases.

(3) That we invite a full statement as to what the Veterinary Adviser for Lancs. and Cheshire, Mr. A. L. Mullen, is prepared to do for, and in conjunction with, the general practitioner.

(4) I do not wish to encroach upon what Mr. Pillers has said—since neither of us will need to reply to further discussion—but I heartily support his suggestion as to furnishing various equipments, etc., to any enthusiast who would use them and afterwards present reports in respect to them; although these measures, by themselves, would not be rapid enough to accomplish all your Council would like to see done, with least loss of time.

(5) To arrange for post-graduate courses and surgical classes in our own areas, where each lecture or demonstration should be duplicated so that neighbours could attend on one day and work for a neighbour the next, so that all would have an opportunity, as set out in the draft read at the Summer Meeting at Chester. This matter has recently been discussed in Council, and I am greatly disappointed that, in the opinion of that body, this scheme, owing to the difficulty and expense it would entail and the uncertainty as to the number of members who might agree to attend, is not in the immediate present practicable. I hope, however, that it will be further discussed to-day, as I think the association with, and the encouragement to be got from, the best teachers would be of inestimable benefit, and so fit us to do better work than we have ever done, for "nothing has ever been done in the world that might not have been done better." All men do not possess the same gifts, or incline to the same lines of

thought or procedure, but amongst us we can, if we will, combine to give such service as will render the general practitioner so absolutely indispensable as to cripple any further inroad or attack upon what is, after all, his own particular domain.

General Discussion

Mr. A. L. Mullen (Hon. Secretary), in opening the general discussion, said that he would first of all like to congratulate both the openers of the discussion: their personalities were even more interesting than their remarks. On the one hand, they had an acknowledged expert in clinical diagnosis, and on the other, a practitioner of the old school, both joining in a plea for a more modern outlook in veterinary practice. In accepting Mr. Curbishley's invitation to make a statement of what he was prepared to do as a Veterinary Advisory Officer for, and in conjunction with, the general practitioner, he should follow the example of the openers' remarks and characterise his own observations with brevity.

Since his appointment to Liverpool two years ago, he had been bewildered by the savage attacks to which the advisory service had been subjected from time to time. Perhaps the name "Adviser" had had something to do with it; at any rate, whatever the cause, his own interpretation of the Advisory Officer as a liaison officer between the laboratory and field, laboratory and practitioner made for the team work advocated by Mr. Curbishley.

His work as an Advisory Officer was primarily concerned with the investigation of the more obscure conditions with which the practitioner did not deal in the ordinary course of practice. In such circumstances, he was prepared to co-operate with practitioners in their further investigation and control. In the eradication of the major diseases, such as abortion, mastitis, Johne's disease and tuberculosis from dairy herds, he was in a position to advise veterinarians on different aspects of the work, not because of any additional specialised qualities which he himself possessed, but because he had facilities which gave him definite advantages over the practitioner. Mr. Curbishley invited the assurance that their services were available to practitioners, and that they would take no undue advantage from an introduction to clients. Their services were available to general practitioners in the type of work he had briefly mentioned, and, of course, they would not take unfair advantage of the introduction so made; if his hearers thought they were dangerous, let them use them and find out.

There was one point he would like to mention with regard to Mr. Curbishley's suggestion that an advisory committee be appointed by that Division. He would suggest that such a committee should deal only with individual cases necessitating the services of a consultant. When questions of contagious and obscure disease arose, with heavy loss of stock, then he submitted it was a question for co-operation between practitioners, adviser and research department, rather than for a committee of the Division.

Mr. J. Holroyd observed that the farmer required service and if he called in a veterinary surgeon he expected an immediate response to the call. Another aspect of the subject was that a veterinary surgeon should not always be thinking about how much a client could pay. Most general practitioners knew that they had to do a certain amount of work for which they would not get paid, and it was a case of "taking the good with the bad." Mr. Holroyd went on to say that there were many other points that he would like to mention, but perhaps he would have an opportunity to do so at a future meeting.

Mr. Webster expressed his pleasure at being present. He had been in general practice in England for about two years, and was very busy and contented with his present position. He expressed the opinion that diagnosis was the first essential in general practice. He was in agreement with the formation of a sub-committee with a view to obtaining precision instruments as an aid to diagnosis. Many practitioners had the instruments necessary for general practice, but had not those for which there was little individual use. He thought an Association like the "Lancashire" would have use for the instruments mentioned by Mr. Pillers, and he suggested that two or three members be elected to form a sub-committee to make arrangements to have a central depôt. He thought it would be a good plan, also, to have a library of books. So far as the advisory officer was concerned, he was surprised that he had taken his position so seriously, for if there was an essential man it was he. He was a useful man to combine with, and general practitioners should associate more with him than they did. Mr. Webster referred to the difficulties encountered by veterinary surgeons in general practice, and expressed the opinion that general practice was very interesting, and that a great deal of satisfaction was created when a patient made a good recovery.

Mr. G. Mayall thought that the young practitioner of the present time did not have the advantages that veterinary surgeons had years ago. He gave particulars of his own experience when, as a young veterinary surgeon, he assisted in the administration of a busy practice. He afterwards acted as a locum to many practitioners, which necessitated his travelling about the country, and he was thus able to become acquainted with various procedures and ideas. To-day, the science of medicine was constantly changing and a man had to keep up-to-date if he wished to progress in his profession. He should read a lot and well assimilate the contents of the books he read. He thought it a good plan for the Division to have a number of books for reference. One of the main points in general practice was correct diagnosis, and particular attention should be paid to stomach and bowel ailments in the dog and cat.

With regard to X-ray, most veterinary surgeons found that the expense was too great for the purchase of an apparatus. He would like to know the smallest amount for which a sun-ray lamp could be secured, as he understood that wounds healed more quickly under the influence of artificial sun-rays than of antiseptics. He would like Mr. Mullen to state how long after a cow suffering from streptococcic mastitis had recovered, it was safe to use the milk, and what procedure he would adopt in order to state definitely that the milk was harmless to humans.

Mr. H. R. Hewetson said that most veterinary surgeons agreed that the first essential in practice was service—not only the giving of service, but also the doing of one's best for the patient. He agreed with Mr. Curbishley that it was better for a practitioner to admit, in the case of a condition with which he was not familiar, that he did not know. It was far better to admit that than to do something which would have an unpleasant result. To make a pretence was worse than making an admission. He thought the suggestion

that the Association should possess a library of books and instruments was an excellent one. With regard to the œsophagoscope, he had had it used on one of his patients, and he was amazed at the wonderful way in which the procedure was carried out. Concerning feline gastro-enteritis, very little was known about that condition. Regarding Mr. Curbishley's reference to the young men, Mr. Hewetson said there should be no old men in the profession: the older men should adapt themselves to the modern methods of treatment. There was no room for men who would not alter their ways, and progress.

Mr. H. S. Caldwell expressed his appreciation of what had been said by the previous speakers, and agreed with the suggested formation of an instrument service. With reference to the library, he had been satisfied with the arrangements for the lending of books at the Royal College of Veterinary Surgeons, and he did not think it was necessary to duplicate a library.

Mr. H. T. Matthews thought it had not been realised that the discussion was a direct attack on the educational establishments. The veterinary colleges turned out trained graduates who took up general practice, but the colleges did not continue the training or provide for the continuance of the training. It was not the province of the Lancashire Veterinary Medical Association to continue that training. To put forward their views was very valuable, but so far as the technical training was concerned, that was the concern of the training establishments. Before anything was done in the matter of the purchase of precision instruments, the cost should be considered. He could not see that it was much use purchasing an expensive instrument to lend out, say, once a year. Perhaps the Association should pay a whole-time man to carry out the modern methods of diagnosis. He should be able to use all the instruments referred to by Mr. Pillers, and should be at the service of that Association for a small fee. He did not think that the ordinary practitioner could employ some of the instruments unless he had had an opportunity of acquainting himself with their uses. He agreed with the spirit of the object, but did not think that the Association could do much. He, like Mr. Mullen, had met farmers who did not employ veterinary surgeons, and practitioners should realise that, quite apart from methods of precision, common-sense should be used and application to the patient considered.

He was glad that the subject had been ventilated, but he did not agree that it was the function of that Association to do anything more, except perhaps, to make representations to the educational establishments.

Mr. Webster said he had not been aware that the Royal College of Veterinary Surgeons had such a comprehensive library as had been referred to by Mr. Caldwell, and he would propose that a committee of three members be formed to consider the question of a central depôt for instruments.

Mr. Hewetson thought Mr. Matthews had taken a severe view of the subject, as it was not intended that the discussion should be an attack on the veterinary colleges, but that it should help practitioners with instruments or in the securing of specialised knowledge which would not be available in any other way. He thought the members could trust the Treasurer to ensure that the purchase of instruments would be within the means of the Association. They would be obtained according to the demand, and if, say, one or two practitioners applied for the loan of an instrument, he or they would be asked to prepare a paper paper and report to the Association in due course.

He agreed with Mr. Webster's proposal, and had much pleasure in seconding it.

Mr. Webster's proposal, seconded by Mr. Hewetson, that Messrs. R. S. White, H. R. Hewetson and A. W. Noel Pillers be appointed a committee to consider the question of the purchase of instruments and to report to the Council, the Council to have power to act, was carried unanimously.

THE VAGINAL TREATMENT OF BOVINE STERILITY WITH PARAT LEAVES

J. F. D. TUTT, F.R.C.V.S.
Winchester

Attention has been drawn to this line of treatment as advocated by Dr. Becker, accompanied by a translation of his article.[1]

A further comment[2] on the treatment appeared later, and the last communication[3] contained an article by Dr. H. Meents.

It is now possible to report on 90 cases in which this treatment was either applied by itself, or as an adjunct to other measures, or after other measures had failed to restore fertility.

It has been found, in spite of hopes earlier entertained in this connection, and which were mentioned in a previous communication,[2] that parat leaves are of little or no value in treating vaginitis, but that, in the vast majority of cases, their application seems to intensify the irritation and inflammation, and that it is waste of time to use them until this condition has been rectified. The same remark applies to cases where there is evidence of gross disease in the genital tract, such as endometritis with appreciable discharge, and in such cases it appears clear that their value is restricted to these cases when other measures, although rectifying the condition, have not restored the necessary tonus to permit of successful conception. Their application is especially valuable in heifers, where the smallness of the vagina, and the narrowness of the canal of the cervix, does not always permit of satisfactory intra-uterine treatment.

I think that we must admit that there is no line of treatment which can be relied upon to cure the varying causes of sterility. How often a seemingly hopeless case becomes fertile after prolonged treatment and, conversely, how often an apparently simple case of sterility fails to respond to treatment. How often, too, are absurd claims of restoring fertility made in respect of cows which were never sterile at the start!

Nature of Parat Leaves (*Paratblattchen*).—The name would appear to suggest a botanical preparation. This is not the case. With the strides

made by chemistry, the names and combinations of products daily become more complicated. Parenchymatol is a special chemical combination containing, amongst other things, ethyl-oxalate, acridine, methyl-thionyl-chloride.

It may be mentioned that in cases of mastitis, particularly where there is marked induration, and when seen early, the use of a preparation of parenchymatol, silver and albumen is often attended by excellent results, not only in the cow but in the ewe.

Method of Administration.—This is extremely simple, and no doubt accounts for their advocacy in certain agricultural journals as a "certain

Breed.	Name or No.	Previous History.	Clinical Examination.	Treatment.	Result of Treatment.
1. Guernsey Cow	D. Vera	Has had 5 calves, normal and to full term. Since last parturition has been in more or less constant œstrum	Nymphomaniac. Large cyst, size of a cricket ball, right ovary. Os uteri widely dilated. Viscid mucous discharge. Blood test positive	Cyst ruptured. Two injections of Contramine, and three of 1 per cent. Lugol (250 c.c. each injection) at 7-day intervals. Œstrum became regular, and she was served at 2nd normal heat, but after holding for six weeks came into œstrum again, and no gross lesions being found she was served, and parat leaf treatment applied	Pregnant
10. Roan Shorthorn Cow	Farley i	Aborted September, 1932. Irregular œstrum. Blood test positive	Cervicitis. Uterus not involuted	Cervix dressed with Atarost powder. Parat leaves	Pregnant
11. Guernsey Cow	Farley ii	Normal. In regular œstrum	Vaginitis. Cervicitis.	Atarost powder. Parat leaves	Pregnant
12. Roan Shorthorn Cow	Farley iii	Normal. In irregular œstrum	Cyst right ovary. Cervicitis. Vaginitis	Cyst ruptured. Atarost powder. Parat leaves	Pregnant
15. Shorthorn Cow	Flower 1st	Calved 4 times previously to full term. Blood test positive. Inoculated with live vaccine 4/2/1932. Calved live calf 7 days before time, 11/1/33	Uterus not involuted. Endometritis (slight)	Lugol 1 per cent. 250 c.c. Prolan 125 units and Contramine 2 c.c. 27/1/33. In œstrum 9/2/33, 15/2/33, 11/3/33 Parat leaves then prescribed. Served 11/3/33. Due to calve 16/12/33	Pregnant
22. Jersey Heifer	Holden	In regular œstrum	Nothing abnormal. Dam a bad "breeder": probably hereditary tendency to sterility	Prolan 250 units. Parat leaves as a course, delay service for two heats	Pregnant
34. Shorthorn Cow	Princess	Calved 29/10/32 (2nd calf). Œstrum regular	Nothing abnormal	Parat leaves before and after service	Pregnant
35. Shorthorn cow	Hope	Calved 2nd calf 14/10/32. Œstrum regular	Nothing abnormal	Parat leaves before and after service	Pregnant
72. Guernsey cow. 5 years old	Ruby MD.15	Calved last calf 16/1/32. 23 days before time. Calf dead. Served 27/2/32, 13/4/32, 9/5/32, 21/6/32, 27/12/32	Not examined	Herdsman applied Parat leaves on his own initiative	Pregnant
90. Guernsey Cow. 4 years old	H.W.D.	Aborted last calf. Blood test positive. Regular œstrum. Had been under treatment for 2-3 weeks prior to my examination	Slight vaginitis. Otherwise normal	Parat leaves (one course)	Pregnant

cure for sterility." (I do not wish to be interpreted as decrying their value, as I have found them very excellent, as the records of cases that follow will show, but I cannot support an illusion.) The procedure is to place a green leaf on a white one, fold in the form of a triangle, with the white one on the outside, and then insert into the vagina as far up as possible. If straining is noticed, and this is commoner in heifers than mature cows, the reverse should be adopted at future applications. Under no circumstances should they be applied on the day of service. They should be inserted at least 24 hours before service, and not under 24 hours after. At least three applications should be made after service, and if the animal has turned to her services several times, they should be continued for at least six weeks after service. An interval of not more than seven nor less than four days should elapse between the applications.

Conclusions

(1) That of the 59 cattle which became pregnant, the credit can be ascribed to parat leaves in the case of 41.

(2) That of the remaining 18, the credit is in all probability ascribable to the other treatment adopted.

(3) That of the remaining 30 that proved sterile (one that was destroyed cannot be considered), although a small proportion responded to other treatment, the conditions present were such that it is probable that no treatment would have restored fertility.

(4) That parat leaves prove of the greatest value where there are no gross lesions present in the genitalia.

(5) That in heifers, owing to the impracticability of intra-uterine treatment (and one one might add, often advised but rarely indicated) without damage, their use is of great value.

(6) That where gross lesions are present these should be treated first, and if the animals do not hold after two services at termination of treatment, and if by clinical examination they appear cured, then parat leaves may with advantage be tried.

References

[1] "The Vaginal Treatment of Sterility." *Veterinary Record*, 1932, p. 1379.
[2] "Vaginal Treatment of Sterility with Paratblattchen." *Veterinary Record*, 1932, p. 1448.
[3] "Parat Leaves in the Treatment of Sterility and Vaginitis." *Veterinary Record*, 1933, p. 113.

The Ministry of Agriculture for Northern Ireland announces that one of its veterinary inspectors will be in attendance at various sales of pedigree cattle in Scotland, to issue permits for the importation of any animals purchased thereat by Northern Ireland breeders.

Clinical Reports

FOREIGN BODY FIBROMA CAUSING OCCLUSION OF THE SMALL INTESTINE*

NORMAN P. MALE, B.Sc., M.R.C.V.S., D.V.S.M.

History.—The patient was a Pekingese bitch about two years old. In November, 1932, cystic ovaries were diagnosed and an operation was performed. This was not done by me, as the owner of the dog was living in another district at the time. According to information, the recovery was uneventful. Some little while afterwards vomition occurred, at first at isolated instances but later at ever-decreasing intervals till it became quite a regular happening a short while after feeding. The bitch began to lose flesh and became thin, although appetite was maintained. She was eventually brought to me in a very poor state of health, being extremely thin, with a capricious appetite.

Examination.—Pulse, respiration and temperature normal. On palpation of the abdomen a firm body about the size of an egg, and not unlike it in shape, could be felt situated in the upper part of the cavity behind the last rib. A foreign body was immediately suspected, and to verify this an X-ray examination was made. The first radiograph was taken without the administration of any radio-opaque substances. The succeeding ones were taken at varying intervals after a barium meal had been given. Seventy-five per cent. barium sulphate and 25 per cent. tragacanth were used, about 1 oz. being fed.

The results did not indicate the presence of a foreign body, and the examination was rather handicapped by repeated vomition as soon as the barium reached the stomach.

It was decided to perform an exploratory laparotomy. This was carried out under chloroform anæsthesia.

Operation.—An incision was made one inch anterior to the umbilicus, continuing to two inches posterior to it. The firm body was withdrawn through the opening, and it was found to be a fibroma surrounding and almost completely occluding the lower part of the small bowel. The mesentery superior to it was twisted in some four or five complete and tight turns, being about two inches in length and apparently firmly attached to the upper part of the abdominal cavity.

The bowel above the fibroma was considerably dilated and inflamed, and engorged veins covered the fibroma itself.

Enterectomy was performed, and the bowel was united again by lateral anastomosis, a fold

*Case reported to the Annual Meeting of the Royal Counties Division, N.V.M.A., held at Reading, February 2nd, 1934.

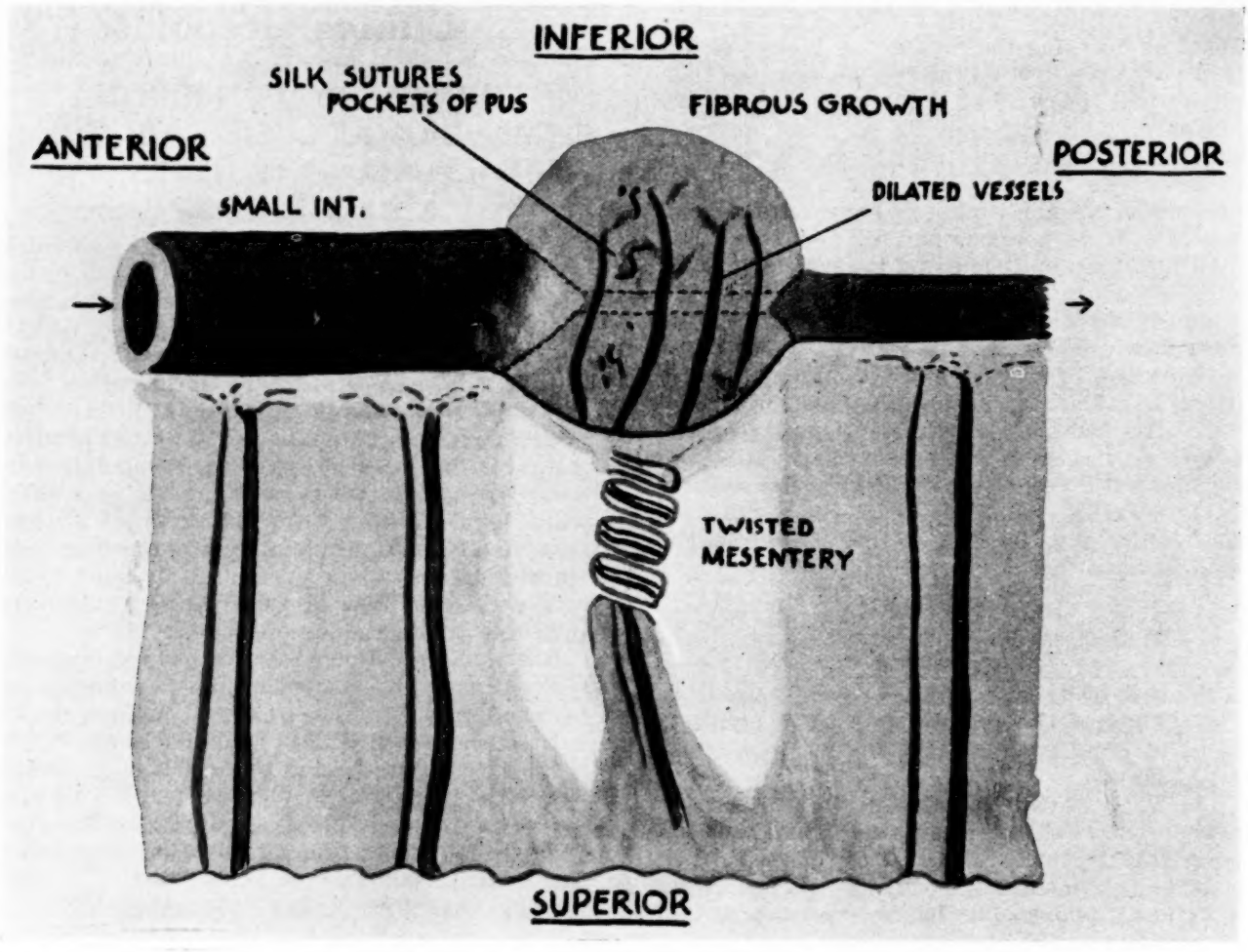

Diagram Showing Fibroma, Occluded Lumen and Twisted Mesentery.

of mesentery being carefully placed over the reunited bowel.

Sequelæ.—Recovery was uneventful, healing occurring by first intention. The patient was given an injection of 0·01 gram of S.U.P. 36 the day after the operation and another on the following day. The diet consisted of liquid nourishment for a week, and continued with light and frequent feeding. No vomition has occurred since, and she is rapidly gaining weight.

Observations.—The fibroma was caused by a number of silk sutures embedded in its substance, together with numerous small pockets of pus. The sutures must have remained undissolved from the previous operation, but it seems rather strange for them to be in such a position.

A veterinary conference, in which representatives of French Equatorial Africa, French West Africa and Nigeria are taking part, opened at Zindor on February 15th. The conference discussed various problems relating to the migration of herds, the exchange of animals, and kindred subjects.

A NEEDLE AS A FOREIGN BODY IN THE NECK*

NORMAN P. MALE, B.Sc., M.R.C.V.S., D.V.S.M.

History.—The patient was a Pekingese bitch about eleven years old. When brought to me she was very thin, with a capricious appetite, and seemed very disinclined to feed. There was a sinus to the left of the mid-line of the neck in the region of the upper third of the œsophagus. This sinus discharged a fœtid pus. This same state had been present for some months, the sinus closing up only to break out again close by.

Examination.—A foreign body was suspected and an X-ray examination was made. This revealed a needle embedded in the subcutaneous tissue of the neck.

Operation.—Morphia (gr. $\frac{1}{6}$) was administered and the foreign body removed under a local anæsthetic, cocaine (gr. $\frac{1}{2}$) being used.

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*Case reported to the Annual Meeting of the Royal Counties Division, N.V.M.A., held at Reading, February 2nd, 1934.

Observations.—The bitch no doubt swallowed the needle, which was complete with a length of thread, and this had worked through the wall of the œsophagus into the subcutaneous tissue.

MINISTRY AND LICENSING OF BOARS

It was stated at a recent council meeting of the National Pig Breeders' Association that the Ministry of Agriculture, in a letter on the standard of commercial pigs, had made a reference to the possibility of the establishment in the near future of a Pig Development Board.

The Secretary of the Association had stated that he had approached the Ministry of Agriculture regarding the licensing of boars for breeding purposes. The Ministry of Agriculture had replied that it was not at present prepared to control the use of boars, and gave as its reasons:—

The proportion of undesirable boars in the country was far less than in the case of scrub bulls, and that the scheme for the licensing of bulls which was to be brought into England and Wales in August, 1934, should be given a trial.

The whole question was affected by the payment on a quality basis for bacon pigs under the marketing scheme and its consequent influence in the direction of grading up breeding stock.

Lord Daresbury, a member of the Council of the National Pig Breeders' Association, will be honorary president of the council for this, the jubilee year of the Association.

* * * * *

A special census of the island cattle is being taken in Guernsey. The object is to obtain information for a committee, set up to enquire into the milk industry of the island in view of the serious situation brought about by a large number of farmers giving up dairying in favour of greenhouse culture.

Review

ANIMAL ECOLOGY

[**Exploring the Animal World.** By Charles Elton, Director of the Bureau of Animal Population, University of Oxford. 119 pp. Geo. Allen and Unwin, Ltd. Price 3s. 6d. net.]

What this fascinating little book—which is a reproduction of a series of broadcast talks given by the eminent naturalist who is its author, and has made his subject very much his own by the range and intensity of his studies—is about can best be seen, we believe, if we reproduce a few passages.

"The farmer complains that he has a tremendous number of rats about his place: starlings in thousands of thousands have recently occupied one of his spinneys for a winter roosting place; some get injured as the birds flock in to roost at night and these fall to the ground below the heavily packed branches and are devoured by rats. The news of good feeding brings more rats. Other things fall from the branches also—the seeds of elderberries that the starlings have eaten. After fifteen years the trees in the spinney are broken, fouled, poisoned and destroyed by the multitudes of birds, and the birds go away to find a better place. By this time a new grove of trees is growing up—a thicket of elders, and when the bushes flower thousands of bees and flower-haunting insects are attracted to the blossoms, and there may be a fly-catcher and a band of swallows at work eating some of the insect visitors. . . ."

"Some scientists at Aberystwyth Plant Breeding Station wished very much to know just exactly how a sheep spent its time, in order to link this up with work on pasture production. They put two sheep in a pen, and watched in turns for a day and a night. They found that the sheep spent half their time eating and chewing the cud, and the other half resting and doing nothing at all. . . ."

"There is a small island at the eastern point of Anglesey called Puffin Island. Here many sea-birds make their homes in summer, and among them puffins, various gulls, and guillemots. One year the goats that used to roam over the island were removed. As a result there was a great growth of a particular plant called Alexanders—a relative of the hemlock and the cow parsley. The herring gulls and lesser blackbacked gulls, which like cover for nesting, greatly increased, and this affected the guillemots, whose eggs the gulls are fond of. The puffins, on the other hand, like open ground round the burrows where they live, and these decreased. Here is a case where you have to decide whether you want gulls or guillemots and puffins. . . ."

"Game-birds and animals are liable to become diseased if they get too crowded. If you continue to protect rabbits until they are extremely thick on the ground there is a real danger that they may develop epidemics of coccidiosis or other diseases. When this happens you notice a sudden scarcity. This shows you that protection is not merely a question of catching stoats and shooting buzzards. You can protect too much, and if you do this the game will overmultiply and the numbers fall lower than if you had not protected them at all." Then, talking about some curious observations made upon the fluctuations in numbers of willow grouse in Norway, caused by much the same agencies as in the above example of the rabbits, Mr. Elton says that "enemies of game may be of two kinds—predators and parasites—and the two work against each other."

Couched in the simple language of broadcast talks, these illustrations may seem elementary to the reader, but behind them there is a wealth of observation and profound study. For the author has much to say upon his own experiences, such as the taste of the flesh of Polar bear, upon which he had to subsist while pursuing his observations in Arctic regions, and the ways of life of some odd birds, called boobies and noddies, which are the supreme denizens of some lonely rocks situated in mid-Atlantic near the Equator; though he is no less interesting when he tells us of his vigils to study the habits of field mice in homely Oxfordshire. And in the sober language of his contributions to the specialised technical journals all naturalists are familiar with the extraordinary depth and breadth of the author's observations.

The passages convey—better we believe than any attempt at verbal definition—what is the meaning and scope of *ecology*, a science that studies wild animal and plant life and is "one of the largest growing points of biology at the present day." Its method of approach is rather different from that of most other branches of natural history. For one thing, its technique seems to be exceedingly simple (probably a reason why it has been left till last by scientists) and consists in making an infinite number of careful observations on the habits of all kinds of living animals (it is really surprising for most of us to read, for example, that earthworms at night have "the swiftness and tremendous litheness of snakes.") Ultimately, by its aid, "we hope to attain fuller knowledge and control of dangerous diseases and pests, and some foreknowledge of the changes in natural resources such as fisheries." We attain this end by making observations upon the animals of the countryside, their numbers, their changes in numbers (including "plagues"), the spread of introduced forms, the relations between diurnal and nocturnal forms of life, the significance of sanctuaries, and all the relations and interrelations, reactions and repercussions, among the many forms of animal and plant life in any given locality.

In a recent number of this journal (Vol. xiv, No. 2), reference was made to the cyclical phenomena that occur in the prevalence and contagiousness of cattle plague in some territories where the disease is enzoötic. At the same time, brief allusion was made to the fluctuations that occur in the severity of some other diseases, including some of the most deadly human epidemics. In a sense, therefore, epidemiology and epizootiology are merely special aspects of the very much larger subject, animal ecology (in much the same way as helminthology is of systematic zoology), and we cannot hope to obtain a sure understanding of the special issues that more intimately concern us as veterinarians without some acquaintance with the fundamentals of the larger subject. Hence, we offer here no excuse for reviewing this excellent little book at much length, feeling somehow certain that the subject of which it treats so vividly will become one of ever-increasing importance to future generations of veterinary workers.

THE COMMON ORIGIN OF MAN AND APE

Professor Elliot Smith, in the course of a series of lectures on human biology now being delivered at the Royal Institution, said that the recent researches of Dr. S. Zuckerman and Professor Le Gros Clark had introduced a novel element into the biological study of mankind by considering the physiological evidences of man's affinity to the ape. With these orderly statements of evidence and argument at our service there could no longer be any doubt of man's ancestry. He was certainly sprung from a group of apes which many millions of years ago split into two series, one from which the chimpanzees and gorillas were derived and the other from which man's ancestors sprang. Both events in all probability occurred in Africa. The study of the evidence upon which these inferences were based provided a fuller understanding of the nature and potentialities of man and human nature. The fact of the common origin of man and the apes was revealed in the amazing identities of structure, so that it was a simple statement of easily demonstrable fact to call man a big-brained ape—a phrase that still aroused as intense emotions of resentment as did Huxley's so-called blasphemous lectures more than 70 years ago. It was none the less the duty of men of science to state facts plainly and unequivocally.

The outstanding distinctive character of man was his muscular skill, which found expression in the acquisition of speech. We could infer from the casts of the brain cases of Peking Man, Pithecanthuopus, and Piltdown Man that speech came into being during the transformation of ape into man. The possession of speech enabled men to accumulate knowledge and traditional ways of thought and action, and brought them more and more under the domination of

Abstracts

[Prevention of Infectious Diseases. O'Brien, R. A. *The Lancet, 226,* 5762, 253-256.]

Dr. O'Brien is by no means an unfamiliar figure at meetings of our societies at which inoculation against canine distemper is discussed, and his association with veterinary immunology is reflected in this contribution to the series of lectures in progress during the Winter Session at King's College Hospital Medical School.

The lecture is an informative amplification of his opening statement that the methods of prevention and control of contagious diseases readily fall into three groups: (1) isolation and quarantine; (2) the destruction or removal of the infecting agent by general measures of disinfection and sanitation; and (3) immunisation. Throughout he adheres closely to "the procedure natural to a bacteriologist" of keeping an eye on the infecting agent, bacillus or virus.

Fortunately, we have considerable knowledge of the activities of traceable disease agents, but it is extraordinarily difficult to avoid carrying infection. How often does a doctor or a nurse carry infection to a patient? In the vexed case of puerperal infection, for example, this danger apparently can be avoided only by asking the bacteriologist to certify that the doctor or nurse harbours no potentially dangerous microbe, or by *efficient* masking. In this connection, too, an all too familiar feature is the distressing infection of patients with a second disease, while they are in hospital suffering from an illness. How does infection spread? Is the virus really carried far, floating in a minute droplet of sputum or mucus expelled during coughing? Or is the virus more resistant to drying and light, and is it carried from one patient to the next by the doctor or nurse? Puzzles of this kind will not readily be solved until there are available animals susceptible to the disease under investigation. "Our experience with dog distemper is suggestive," proceeds Dr. O'Brien. "By simple precautions, rigidly carried out, we are able month by month to keep simultaneously in a large room numbers of normal ferrets which are highly susceptible to distemper, and ferrets at all stages of the disease. My veterinary colleague, Major Dalling, kindly allows me to say that to test the efficacy of the measures adopted to prevent the carriage of infection he intentionally keeps normal ferrets in metal bins, intermingled capriciously with the bins containing the infected ferrets; yet after approximately 1,500 'ferret-days' exposure' during the past two years we have never observed distemper amongst the exposed normal ferrets until, at the conclusion of some weeks of exposure, an injection of distemper virus has been made to establish beyond doubt that the ferrets were not already immune."

Under ordinary conditions of communal life and travel, however, we cannot yet satisfactorily prevent the noxious organism reaching the individual whom it will afflict, though attempts can be made to destroy the infecting agent or to prevent its reaching the population after it has left the original patient or carrier.

To reinforce our control of infectious diseases, after general measures of isolation and of hygiene have played their part, immunisation comes to our aid.

By passive immunisation we can almost instantly cut short certain epidemics, but the use of serum, while invaluable in an emergency, cannot serve to control the general incidence of disease in the community. The convinced advocate of active prophylaxis maintains that active immunisation will play an incomparably greater part in the medicine of the future. The expectation that in the future the parents of every child will look forward to giving up a few months of the child's life to active immunisation against a number of the dangerous diseases to-day may seem Utopian: the alternative is the system we at present endure.

For illnesses apparently caused by soluble toxins—so-called "exotoxins"—such as diphtheria and tetanus, almost complete protection can already be promised. For the virus diseases the future is rich in promise. Against small-pox in man, veterinary virus diseases such as rinderpest, fowl pox, and true canine distemper, high protection can be given. The key to progress is a supply of virus and a susceptible animal for experimentation. Concerning prospects of obtaining supplies of virus, the method of growing virus on the chorio-allantoic membrane of chick embryos offers a hopeful harvest, while the most notable of recent "susceptible animal" discoveries is that of a group of workers at the National Institute for Medical Research, that human influenza is transmissible to ferrets.

Dr. O'Brien concludes his interesting survey with a discussion of the problem as to whether the third group of diseases—the bacterial—will prove amenable to active immunisation, quoting Topley, who, in discussing the implications of his important studies of experimental epidemics in mice, emphasises the value of antityphoid inoculation for animals or man exposed for a limited period, though he is not ready to rely on it where the risk is severe and continuous. Against these infections of the salmonella group, active immunisation of animals, however, apparently offers only temporary aid.

W. B.

customary rules of conduct and opinion; for it was easier to borrow than invent, to copy than to think. Thus mankind became bound together by the slavery of imitation.

[**Contagious Pustular Dermatitis.** Glover, R. E. (1932-33). Third Rep. Direct. Inst. Anim. Path. Univ., Cambridge. 1-18, 7 tables (11 refs.)]

Material obtained from cases of contagious pustular dermatitis was shown to be capable of setting up well-marked reactions in experimental lambs. A few weeks after the healing of the lesions, the experimental animals were found to be immune to the homologous strain of the virus, and cross-immunity experiments showed that all the strains examined, with the possible exception of those of caprine origin, fall into a single serological group.

Using hyperimmune serum and specific virus antigen a good fixation of complement may be obtained, but with sera from lambs which have recovered from an attack of the disease, complete fixation of complement occurs only when a large amount (0·2 c.c.) of serum is used. Complement fixation, however, may prove of value in the detection of virus in suspected crusts. Flocculating antibodies have not been demonstrated in the sera of recovered or hyperimmune lambs. Hyperimmune serum and serum obtained from animals which had recovered from an attack of the disease were shown to contain protective antibodies which were able to neutralise the virus *in vitro*, whilst normal sheep serum was unable to neutralise even high dilutions of the virus.

J. A. N.

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[**Anthrax in Cats.** (Trans. title.) Kowanz, R. (1933.) *Wien. tierärztl. Mschr.*, No. 10, 372-374. Abstr. in *Berlin. tierärztl. Wschr.* (1934), *50*, 55.]

Records of anthrax in cats are very rare. In the few cases reported, the changes described have been inflammatory lesions on the lips and tongue, within the mouth, and in the intestine. The carcass of a well-nourished pregnant cat was submitted to Kowanz (Austria) for *post-mortem* examination; it showed very slight enlargement of the liver and spleen, some slight degree of fatty degeneration of the kidneys, and hardly any perceptible change in the consistency of the spleen pulp; in the small intestine there were seen some mild inflammatory changes. Agar plates were charged with tissue material from the heart, spleen, liver, and kidneys, and colonies developed resembling those of anthrax bacilli. Smear preparations were made subsequently from the spleen and heart blood of the cat, and after staining by Olt's method, they disclosed numerous anthrax bacilli with well-formed capsules. The clinical symptoms recorded in the cat were somnolence, loss of appetite, restlessness and flatulence. The clinical disease ran its course in approximately 24 hours. The cat had been given scraps of liver to eat which had been derived from a cow killed in emergency. Bacteriological examination of the remains of the liver yielded, too, evidence of anthrax infection. Two other cats which had also partaken of the liver remained exempt from the disease.

J. T. E.

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[**Yew Poisoning in Domestic Animals.** Nicholson, J. A. (1933-34). Third Rep. Director. Inst. Anim. Path. Univ. Camb., 169.]

The author has demonstrated the presence of taxine in several varieties of taxus. He suggests that while this alkaloid is probably responsible for death in cases of yew poisoning, its absorption may be facilitated by the irritant action of an essential oil present in the leaves. It is shown that the absorption of taxine takes place solely from the small intestine. In non-fatal cases the alkaloid quickly disappears from the blood stream, being probably broken down by the liver. The symptoms produced by yew are dependent upon disturbances of the cardiac and respiratory centres, and death results from heart failure accompanied by respiratory failure.

A description of the physiological effects of taxine when given intravenously to anæsthetised animals is given and the action of the alkaloid on the heart after perfusion of the coronary vessels is described. Experiments performed on excised uterine muscle failed to afford any evidence that yew possesses abortifacient properties. The state of acquired tolerance to yew which has been reported by other observers was reproduced and the intestinal cells in such cases were found to be resistant to taxine. In cases of yew poisoning a combination of adrenalin, lobeline and barium chloride is suggested.

F. B.

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[**Metabolic Disturbances in Cattle.** Sjollema, B. *Acta. vet. Neerland, 1*, 2.]

(*Concluded from page* 195, *No.* 7.)

The Action of Intravenous Injections of Calcium Salts and Mixtures of Calcium and Magnesium on the Heart and Lungs and on the Composition of the Blood.—The heart action during and after intravenous injections of $CaCl_2$ with or without $MgCl_2$ was studied by auscultation on a number of cattle. It was found that about three-quarters of all the beasts tested could bear $CaCl_2$ alone with impunity, whilst the remainder suffered from a varying degree of heart block immediately after the injection. In most of the non-dangerous group, the heart beat slowed during and for a short time after the injection, a few showed initial slowing followed by acceleration and a few showed no change at all.

The addition of $MgCl_2$ to the $CaCl_2$ was found

to prevent heart block, and so the author recommends the Ca and Mg mixture for routine use in the treatment of milk fever and grass tetany ($CaCl_2$ (crystals) 40 grams + $MgCl_2$ 15 grams dissolved in 300 c.c. of water). The author has also tested calcium gluconate, lactate, lævulinate and glycero-phosphate, but found no advantage in them over $CaCl_2$.

Large doses of Ca intravenously were found to injure the lungs by acting on the capillaries in the alveolar septa, leading to hæmorrhage, exudation and an acute pneumonic state. This takes place in a short period after the injection but can be avoided by care not to exceed the recommended dose, and by not hurrying over the injection.

The effect of intravenous calcium therapy on the blood minerals is to raise the blood Ca greatly, particularly that part in combination with the plasma protein. Blood Mg and P show little change. Return to the normal figure occurs in about four hours.

Conditions under which Grass Tetany occurs and the Symptoms of the Disease.—This is a detailed discussion of all factors of cattle management and nutrition—diet in winter, manuring of pastures, type of soil, growth of spring grass, etc.—believed to have an influence on the occurrence of grass tetany in Holland, where it is so common. The conditions vary so much in different parts that few hard and fast conclusions could be drawn; it appears to be established, however, that the disease is liable to occur when cattle are suddenly turned out on to rich spring grass. Preventive measures are designed to make the change over a gradual one. Of a group of 357 cases of grass tetany, 196 occurred over six weeks after parturition and only nine within four days of calving.

The symptoms are given in detail; they vary over all degrees of muscular tetany, from slight stiffness to seizures with falls to the ground. Acute fatal cases show dark red musculature and emphysematous lungs. Chronic cases show pale moist muscles and petechiæ on the serosæ may be seen.

Disturbances in Mineral Metabolism in Sheep Analogous to Milk Fever.—A disease of lambing ewes [usually called lambing sickness in the British Empire] is common in Holland. It has been found essentially similar to milk fever and responds to the same treatment—an intravenous injection of a solution made from $CaCl_2$ and $MgCl_2$ crystals, 3 grams of the former and [presumably] about 1 gram of the latter. Fat ewes carrying twin lambs are said to be particularly liable to suffer.

Curative and Preventive Treatment of Milk Fever and Grass Tetany.—The author recommends precisely the same treatment for both these conditions and explains why this measure holds good in theory and practice. The Ca/Mg quotient in milk fever is 5/2·5=2 and in grass tetany is 6·5/0·5=15. Now the author's recommended therapy adds on an average 50 mg. per cent. Ca and 8 mg. per cent. Mg to the blood plasma; thus the above quotients become, for milk fever 55/10·5=5·5 and for grass tetany 56·5/8·5=7·5, both of which figures approximate the Ca/Mg ratio of normal blood.

Preventive treatment takes the form of dosage for a short time before calving with calcium-vitamin D preparations by the mouth or by injection. Cows newly calved should not be milked out thoroughly for the first few days. Brewers' yeast is recommended as a source of vitamin D and a mixture of $CaCl_2$ crystals 30 grams, NaCl 25 grams and $CaCo_3$ 100 grams daily for mineral therapy. This should be started about two or three weeks before calving.

The Nature of Pica.—In Holland many cases of depraved appetite in cattle have been observed and research showed subnormal hæmoglobin. Copper sulphate, beginning by daily doses of 50 mg. and using to two or three times that amount over a long period, has given very good results.

This terminates the monograph. A complete bibliography of relevant publications by the author and his colleagues only, is given.

J. E.

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[On Hypocalcæmic Morbid Conditions in Domestic Animals. Carlström, B. (1933.) *Skand. Vet.-tidskr.* 5, 229-271 (2 tables, 1 fig. 26 refs.). Original in English; summary in Swedish and English.]

This article is important to practitioners and sets out the subject as follows:—

A.—Review of the work which has contributed to the present conception of hypocalcæmia.

B.—Illnesses due to hypocalcæmia and associated with:—

(1) Parturition and/or lactation. (Tetany in the bitch; milk fever in the cow.)

(2) Rachitis in young growing animals. (Tetany and convulsions in the pig, tetany and rachitis in the puppy, tetany in the calf.)

B1.—The Hypocalcæmias of Parturition and/or Lactation.

(*a*) *Tetany in the Bitch during Lactation.*—The author postulates that the disease is a calcium deficiency, supporting this by experiments: (1) in which he reproduced the symptoms by injecting sodium oxalate intravenously and so inducing an artificial fall in blood calcium; (2) in which dogs were fed on a calcium-deficient diet during pregnancy and lactation. The blood calcium fell during the eighth week of pregnancy and with the onset of lactation a marked depression occurred

(Ca 5·15 mg. per cent., Mg 2·92 mg. per cent.).

In addition, puerperal eclampsia appears to depend on the Ca excretion by way of the milk, as suggested by the fact that removal of the puppies cures the illness in the early stages. The author recommends 5-7 c.c. of a 10 per cent. solution of calcium chloride in milk twice daily as a preventive measure; as a curative the intravenous or intramuscular injection of calcium gluconate (10-20 c.c. of a 10 per cent. solution).

(*b*) *Milk Fever in Cattle.*—The author confirms the work of Dryerre and Greig, Little and Wright, and Sjollema, that in cases of paresis puerperalis there exists a hypocalcæmia. Thirty-four cases are detailed in which the blood calcium was estimated before and after treatment. He attributes the hypocalcæmia to:—

(1) Co-excretion by way of the milk. This is supported by his observations on a cow suffering from milk fever. The blood Ca in the right mammary vein was 4·8 mg. per cent. The right half of the udder was milked out and the figure fell to 4·3 mg. per cent. Then the figure was ascertained for the left mammary vein (4·6 mg. per cent.), whereupon the left udder was inflated with air, when the blood Ca content of the left vein rose to 6·2 mg. per cent.

(2) Parathyroid dysfunction as a result of the demand put upon its activity and the effect of ovarian hormones.

Paresis puerperalis at parturition in a cow which has not commenced to lactate is explained on the assumption that some early secretion of milk has occurred, 2 litres of milk containing as much calcium as is present in the blood stream.

Experiments are described to show that if paresis puerperalis is associated with hypocalcæmia, then the latter is accompanied by symptoms similar to those of milk fever. The hypocalcæmia was artificially produced by administering sodium oxalate intravenously and by the mouth. One cow injected intravenously exhibited acute fall of blood Ca with development of tetany. A second cow which received the salt *per os* suffered from fall in blood Ca (11·2 mg. per cent. to 2·7 mg. per cent.) together with coma and paralysis. The fact that hypocalcæmia produced in the same manner gives rise to the two different syndromes of tetany and coma suggests that the hypocalcæmia *per se* is not the cause of the nervous symptoms. The writer postulates, after the theories put forward by Kummer and by Rundstrom, that the calcium fall permits toxic metabolites to invade and poison the nerve cells. Thus the intensity of the symptoms need not nor does not run parallel with the degree of hypocalcæmia. In this connection the writer draws attention to three of his patients which failed to respond to udder inflation but recovered after the intravenous injection of $CaCl_2$. In each of these the calcium fall was quite slight but the patients had been heavily fed. Under these conditions, the calcium fall was just sufficient to permit of cell invasion. Udder inflation increases the blood calcium very little when this already stands at a comparatively high level; $CaCl_2$ (intravenous) acts satisfactorily.

B2.—Hypocalcæmic Morbid Conditions in Connection with the Rachitis in Young Growing Animals.

The hypocalcæmic syndrome is seen most frequently in the pig and then generally in rapidly growing young pigs in good condition. The symptoms are associated with feeding and are seen as muscle stiffness (latent tetany) or convulsions (manifest tetany) the blood calcium being 6-8 mg. per cent. instead of 10-14 mg. per cent.

The writer advises in such cases chalk added to the ration (10 per cent.) unless much milk is used, when up to 20 per cent. should be used. Calcium gluconate (subcutaneous or intramuscular) is good in manifest tetany. In rachitis the effect is enhanced by the use of vitamin D. In the dog, convulsions are common but rarely due to Ca deficiency. The nervous complications of distemper are of course of frequent occurrence, but blood examination in such cases shows no hypocalcæmia. Skaar fed puppies on a Ca-deficient diet containing no vitamin D. They exhibited rachitis and attacks of tetany. The blood Ca fell from 10-11 to 7-5 mg. per cent. and tetany set in when the Ca reached 5-6 mg. per cent.

G. B. B.

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[The British Poultry Industry in 1932-33. Francis, P. A. (1934.) *Journ. M. of Agric. and Fisheries, 40,* 10, 913-922.]

The author describes the growth of the industry since the war. Compared with 1913, egg production in 1932 is estimated to have increased by about 180 per cent. In 1913, 70 per cent. of the eggs were imported, whereas in 1932 the percentage was 40. Further, during this period egg consumption in this country per head of the population had increased by about 30 per cent. The British consumer is showing a growing preference for home-produced eggs. The value of poultry and eggs sold off farms alone in 1932 was estimated at £19,750,000, and ranked third in order of importance among agricultural products, being exceeded only by live stock and milk and dairy produce.

Since 1918, the British farmers have devoted much more attention to poultry keeping, as it has frequently been the most profitable, if not the only profitable, branch of their activities, and from that time we have seen the development of the specialist egg farm. During the

last few years a fall in prices for poultry produce and feeding stuffs has been experienced, so much so that the poultry keeper's possible margin of profit has now been reduced to a point that leaves little margin for errors in technique or business management.

Figures show that in 1932 the value of imported eggs was £9,062,000 and poultry £2,453,000, and therefore there is as yet no over-production of these commodities at home.

It is obvious that should the prices for poultry produce continue to fall without a corresponding reduction in the prices of feeding stuffs, production will be reduced. To assist the industry the Import Duties Act, 1932, provided for a Customs duty of 10 per cent. *ad valorem* on eggs and poultry, with an alteration by the Ottawa Conference to a specific duty on eggs, and further modifications on September 15th, 1933.

The importance of education and research in matters affecting the industry is stressed, and details are quoted of help given by the Government and various associations. Included in the Government work is the National Mark Scheme and details are furnished of the volume of work effected by the 150 egg packing stations and 33 poultry packing stations. There are now four stations each having an output exceeding ten million eggs per annum, and a further 14 with an output between five and ten million.

Further powers have been given by the Agricultural Marketing Act, 1933, which enables the Government to regulate imports of agricultural products, including eggs and poultry, to permit the effective organisation of the home industry.

This paper was originally prepared in March, 1933, for presentation at the Fifth World's Poultry Congress and has been revised.

N. D.

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[**The Recovery of *SALMONELLA PULLORUM* from the Fæces of Adult Carriers of Pullorum Disease.** Greaves, R. E., Dearstyne, R. S., and Gauger, H. C. (1933.) *J. Agric. Research*, *47*, 441-445.]

The purpose of this investigation was to determine whether adult carriers of *S. pullorum* voided the organism in their droppings and, if so, whether the recovered organisms were sufficiently virulent to produce the disease in negative adult birds and chickens when administered *per os*. Samples of droppings from 21 known carrier birds were examined at intervals. From two birds *S. pullorum* was recovered and the organisms produced the disease when administered *per os* to proven negative adult birds, and one strain produced the disease in three-day-old chicks when administered in the same way. It is claimed that this paper offers additional proof that the droppings of adult carrier birds may be a source of infection for negative adult birds.

Lytic factors present in the fæces were at times sufficiently strong to prevent the recovery of the organism from certain of the samples. This was detected by inoculating a broth culture of *S. pullorum* on plates which had previously been inoculated with fæcal cultures from negative birds.

R. L.

LOSSES FROM POULTRY DISEASES

In his annual review of the poultry industry, which was first issued in 1895, Sir Edward Brown gives his opinion that the most serious matter during 1933 was the further increase of disease and mortality among poultry. A rapid rise in that respect has been noted over several years and has now attained alarming proportions. It is difficult to obtain actual returns so far as poultry farms are concerned. The high mortality at the 45 laying trials recognised by the National Poultry Council in Great Britain and Northern Ireland, 1932-33, is one piece of evidence. At these 21,161 birds were entered, of which 2,783 died during the period of the trials, or 13·05 per cent. In the open trials, several of which have been longer operated than the county trials, the deaths were very high, ranging from 9·96 to 25·51 per cent., and the average was 15·24 per cent. While the county trials record an average of 10·97 per cent., nearly half were from 11·82 to 17·78 per cent. It is a safe computation that the average mortality on farms is not less than these proportions.

Taking England and Wales as typical, and leaving out geese and turkeys, that would mean a mortality of adult fowls and ducks of nearly 3,700,000. It is more difficult to estimate the loss of young birds, by reason of the fact that the losses before June 4th, when the census is taken, are usually greater than is the case later. A conservative computation is a mortality of more than 7,000,000 chickens and ducklings, and Sir Edward Brown thinks it is a safe assumption that the annual loss by disease among poultry in Great Britain and Northern Ireland is well in excess of £2,000,000.

The trouble is attributed mainly to the "abnormal practices" applied to breeding and production in recent years. Sir Edward Brown urges the need for working as closely to nature as is compatible with modern conditions and the realisation of an adequate profit. The lessons of the past year, he believes, again show the importance of drastic reconsideration of methods which may involve the abandonment of striving for excessive individual egg production.

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POULTRY BREEDING: ACCREDITED STATIONS

The Ministry of Agriculture has issued a list of accredited breeding stations in England and Wales from which poultry-keepers may obtain stock, eggs for hatching, and day-old chicks with a guarantee that everything possible has been done to avoid the risk of disease and to assure a reasonable measure of security with regard to the character of the stock. The scheme was drawn up by the Ministry of Agriculture, but responsibility for administration rests with the county authorities.

Report

Department of Agriculture, Canada

Report of the Veterinary Director-General (George Hilton, v.s., h.a.r.c.v.s.) for the Year ending March 31st, 1933

As in previous years, this report deals with the activities of the veterinary staff of the Dominion, details of which follow an informative review by Dr. Hilton himself.

The Contagious Diseases Division, under the direction of Dr. A. E. Cameron, has been doing useful work, and a description of the methods adopted for the suppression of outbreaks of anthrax, glanders, hog cholera, parasitic mange, etc., is given. It is pleasing to note that Canada is still free from dourine and no outbreak has been recorded for 13 years. During the year under review rabies has only occurred in Ontario. The accredited herd plan for the eradication of tuberculosis continues in force and during the year 256,141 animals were tested under the scheme, of which 3,370 were found to be reactors.

The Pathological Division under the direction of Dr. E. A. Watson, has also not been id'e, and studies of the B.C.G. method of vaccination have been continued. This work, which has been carried out over a period of eight years with three different strains of B.C.G., has satisfied the workers concerned (Drs. Watson, McIntosh and Konst) that "each strain proved to possess an unfixed, potential virulence capable of exaltation on the one hand, and of complete attenuation or reduction of the other." The virulence which was only seen in the earlier descendants was observed to decline under serial cultivation and periodic return to the special bile-potato-media and ultimately disappeared altogether.

Distemper studies in the fox, mink and other fur-bearing animals have continued, and it is stated that dogs and foxes have shown a variable degree of natural susceptibility and resistance to three different strains of virus. One statement in this report which will surprise a good many is that a racoon after inoculation "exhibited typical distemper and died in 15 days." It is believed that this is the first time that this animal has been accused of being susceptible to dog distemper and the importance of this observation from an epidemiological point of view is not to be under-estimated.

This latest report is an extremely important summary of the work which has been carried out in the Dominion during the past year, and Dr. Hilton and his colleagues are to be congratulated.

G. W. D.

N.V.M.A. Divisional Report

LANCASHIRE VETERINARY MEDICAL ASSOCIATION*

Officers Elected at Manchester

A Special Meeting of the Lancashire Veterinary Medical Association was held at the Grand Hotel, Aytoun Street, Manchester, on Friday, December 15th, 1933, at 2.30 p.m.

The chair was taken by Mr. John Spruell, Vice-President, in the unavoidable absence of the President, Mr. T. Wilson. Other members present were: Messrs. A. L. Mullen, A. W. Noel Pillers, J. O. Powley, E. H. Curbishley, J. H. Wright, G. Mayall, C. F. Shawcross, R. S. White, R. C. Locke, J. Holroyd, H. T. Matthews, H. R. Hewetson, H. Leyland and H. S. Caldwell.

Apologies for unavoidable absence were received from Messrs. W. Fowle, T. Wilson, W. Woods, E. J. Burndred, G. O. Davies, A. B. Kerr, G. H. Locke and W. Tweed.

The minutes of the previous Special Meeting, held on May 10th, 1933, were read and submitted to the meeting for confirmation.

Mr. Holroyd expressed the opinion that the reports of the Lancashire and Cheshire Veterinary Inspectors' Sections, which were considered at that meeting, should be included in the minutes. He said that both sections had held meetings and had gone to considerable trouble in drawing up reports, and the least the Association could do was to publish the reports.

Mr. Shawcross seconded the proposal.

Mr. Pillers said that if the reports were published, the remarks of all the speakers at that meeting should be published also. It had been decided before the Special Meeting that there should be no report of the statements made, and that the minutes should be confined to the results of the deliberations.

Mr. Holroyd thought that the decision regarding the non-publication of speeches, mentioned by Mr. Pillers, referred to another meeting which was held in Manchester.

Mr. Mullen asked what the point was in the desire for the publication of the reports.

Mr. Holroyd replied that he thought the Lancashire Veterinary Inspectors' Section was entitled to have its observations published in the minutes of the meeting. If they had been published along with the minutes they would have gone a long way in letting the National Veterinary Medical Association know what the Lancashire Veterinary Inspectors thought about the subject under review, and he again proposed that the minutes be taken as read, with the amendment.

*Received for publication January 13th.

Mr. Matthews thought that the minutes were a record of the conclusions based on the meeting and that that was sufficient. He moved that the minutes be signed as correct.

Mr. Mayall seconded Mr. Matthews' proposition.

Mr. Holroyd repeated his proposal that the reports of the Lancashire and Cheshire Veterinary Inspectors' Sections be published as part of the minutes.

Mr. Pillers seconded, subject to the remarks of all the speakers at the meeting being published at the same time.

Mr. Mullen stated that it was not possible to publish the remarks of the speakers, as there was no reporter at the meeting.

Mr. Holroyd's proposition was put to the vote and, on a show of hands, five members voted for and five against. Four refrained from voting.

The voting was as follows:—

For: Messrs. E. H. Curbishley, J. H. Wright, J. Holroyd, C. F. Shawcross and H. Leyland.

Against: Messrs. H. T. Matthews, G. Mayall, A. W. Noel Pillers, R. C. Locke and A. L. Mullen.

Refrained from Voting: Messrs. H. R. Hewetson, R. S. White, J. O. Powley and H. S. Caldwell.

The Chairman gave his casting vote against Mr. Holroyd's proposition and the minutes of the Special Meeting were signed as correct.

Mr. Matthews asked if there was any reason why the reports of the two Veterinary Inspectors' Sections should not be sent by those sections direct to the National Veterinary Medical Association.

Mr. Holroyd pointed out that the Veterinary Inspectors' Sections were sub-sections of the Lancashire Division and must report to the parent body. He would, however, ask for authority to publish the report of the Lancashire Section.

Mr. Matthews proposed, Mr. Pillers seconded, and it was unanimously resolved that Mr. Holroyd be authorised to publish the report of the Lancashire Veterinary Inspectors' Section.

There being no other business, the meeting formed into a General Meeting of the Division.

General Meeting

The chair was again occupied by Mr. Spruell, and the attendance was as reported above, with the addition of Mr. G. C. Webster.

The minutes of the previous General Meeting were read and confirmed.

Correspondence.—(1) From the President, Mr. T. Wilson, in which he stated that he was confined to bed, recovering from an operation, and submitted his apologies for his absence from the meeting.

Mr. Curbishley moved that a letter of sympathy be sent to Mr. Wilson and that a letter of sympathy be sent also to Mr. W. F. Morton, of Alderley Edge, who also was recovering from an operation. The proposition was carried unanimously.

(2) From the Chairman of the Liverpool University Veterinary Society inviting the members of this Division to attend the Annual Dance to be held in Liverpool on February 9th, 1934.

(3) From the General Secretary of the National Veterinary Association, with reference to the payment of a flat rate of 5s. for veterinary attendance in street accident cases to dogs and cats. After discussion, it was resolved that the fee of 5s. recommended be approved and that the National Veterinary Medical Association ask the R.S.P.C.A. to acquaint all their local branch Secretaries of the arrangements for the payment of such fee.

Election of New Members.—Messrs. E. A. Comer, M.R.C.V.S., D.V.S.M. (Vict.), T. A. Lloyd Jones, M.R.C.V.S., D.V.S.M., and E. P. Shallcross, M.R.C.V.S., were elected members of the Association, on the proposition of Mr. Mullen, seconded by Mr. Holroyd.

ELECTION OF OFFICERS

The Chairman pointed out that the rules provided for three Vice-Presidents (one of whom was the retiring President) and a Council of ten. There were twelve nominations for Council, and, therefore, the two gentlemen who received the highest number of votes would become Vice-Presidents. Messrs. Leyland and White were appointed scrutineers.

President.—Mr. Spruell, on behalf of Mr. Wilson, in proposing that Mr. Holroyd be elected President for the ensuing year, said that no words of his could express his pleasure in making the proposition.

Mr. Curbishley seconded and said that Mr. Holroyd was a well-known and well-respected member of the Association. The Association was honoured by his acceptance of the office again.

Vice-Presidents.—Messrs. T. Wilson, S. H. Gaiger and R. C. Locke (the last two gentlemen named, by ballot).

Council.—Messrs. E. H. Curbishley, G. O. Davies, H. T. Matthews, R. H. Oddy, C. F. Shawcross, H. Sumner, junr., J. Spruell, H. R. Hewetson, A. B. Kerr and G. C. Webster.

Hon. Treasurer.—Mr. Noel Pillers was again elected Hon. Treasurer on the proposition of Mr. Locke, seconded by Mr. Powley.

Hon. Secretary.—Mr. Spruell proposed and Major Wright seconded that Mr. Mullen be reappointed Hon. Secretary. This proposition was carried.

Hon. Auditors.—Messrs. J. H. White and T. Dobie were proposed by Mr. Spruell and seconded by Mr. Holroyd as Hon. Auditors for the ensuing year.

Representatives on the Council of the National Veterinary Medical Association.—On the proposition of Mr. Holroyd it was unanimously resolved that this matter be deferred until the April meeting.

Summer Meeting.—At this stage the meeting went into committee to consider a letter and report from the Council and, on being resumed as a General Meeting, the subject of arrangements for the Summer Meeting of 1934 was considered.

The Secretary submitted proposals that the meeting be held at Southport on the last Wednesday in June, and said that Messrs. H. G. and H. R. Hewetson had kindly consented to the use of their premises for the purpose of minor operations by members of the Division. Ladies would be invited to attend and a Ladies' Committee would be formed to make arrangements. Perhaps Mrs. Hewetson, Mrs. Pillers and Mrs. Locke would kindly act as a committee. It was proposed to hold lunch at the Prince of Wales Hotel, Lord Street, at 12.30 p.m.

Mr. Matthews proposed, Mr. Mayall seconded and it was unanimously resolved, that the Summer Meeting be held as suggested.

Discussion. — The Chairman called upon Messrs. A. W. Noel Pillers and E. H. Curbishley to open a discussion on "A Scheme to Initiate Assistance in Clinical Work." [For these papers and a report of the general discussion, *vide* the commencement of this issue.—Ed., *V.R.*]

Interesting Specimen.—Mr. Hewetson exhibited a collection of calculi which had been taken from a Pekingese bitch, aged nine years.

The bitch was brought to his surgery in an uncomfortable condition. There had been no previous illness or pain until twelve hours previously. Prognosis was hopeless and on *post-mortem* examination the calculi exhibited were taken away. It was rather interesting, in view of the number of calculi, that there was no previous illness.

Next Meeting.—The date of the next meeting was considered, and it was resolved that it be held in February, the actual day and place to be arranged by the President and Hon. Secretary.

The meeting concluded with a vote of thanks to the Chairman.

A. L. Mullen, *Hon. Secretary.*

UNIVERSITY OF LONDON STAFF EXAMINERS

The University of London list of Staff Examiners for 1934 includes the following: *Veterinary Anatomy.*—E. S. Shave, M.R.C.S., M.R.C.P., F.R.C.V.S.; *Veterinary Hygiene.*—Colonel A. G. Todd, C.B.E., D.S.O., M.R.C.V.S.; *Veterinary Pathology.*—J. T. Edwards, D.Sc., M.R.C.V.S.

The N.V.M.A. Motor Insurance Scheme

The objects this scheme set out to attain were, first, the provision of a motor insurance policy that would be really "comprehensive" from the point of view of the practising veterinary surgeon who uses his car extensively for professional and business purposes in addition to private pleasure purposes; secondly, to secure for the benefit of members of the N.V.M.A. special concessions in premium rates, such as have been secured by other professional bodies.

The average private car policy imposes severe restrictions upon business and professional usage: whilst it permits the person in whose name the policy is issued to use the car "in person" in connection with his business or profession, it ceases to become operative when the car is used by any other person other than for "private, social and domestic purposes." It is invalidated if goods are carried, apart from personal baggage and effects. For the special form of policy which will remedy these defects, the average insurance company requires an extra premium of 25 per cent. Even then the protection is not complete in the case of a car used on the business of a partnership or in a case where an assistant uses his own car in the service of his employer. Such usage involves the Insured's partners or employers in serious Common Law liabilities, against which no protection is given by any of the ordinary standard forms of policy in issue.

In this respect the N.V.M.A. policy is unique. It indemnifies the partners or employers of the Insured as though they were the Insured. It permits any person to use the car for any purpose connected with the Insured's business or profession, including the carriage of goods. In fact, DRUGS, SURGICAL INSTRUMENTS and the like (as well as rugs, coats and luggage) are fully insured by the policy, without extra premium, against fire, theft and accidental damage. Another valuable and unusual feature is that the policy pays all legal costs and expenses incurred in the defence of any charge of MANSLAUGHTER brought against the Insured or his partner/s. Manslaughter charges appear to be greatly on the increase. A large proportion result in an acquittal, the legal costs of securing which are irrecoverable against the Crown and irrecoverable also under the ordinary motor policy.

Other important special features of the N.V.M.A. policy are the AGREED VALUE CLAUSE, IMMEDIATE REPAIRS PERMIT, payment of the UNEXPIRED VALUE OF LICENCE, personal accident benefits claimable both by INSURED AND WIFE and a scale of NO CLAIM BONUS RISING TO 25 PER CENT.

THE RATES OF PREMIUM ARE 20 PER CENT. TO 25 PER CENT. BELOW the ordinary tariff, according to make of car.

Exact quotations and full information are available from the Secretary or from the Insurance Managers, S. H. Cannon and Co., Ltd., Incorporated Insurance Brokers, 3, Bucklersbury, London, E.C.4.

N.B.—The special extensions protecting the interests of the Insured's partner/s or employer/s can be claimed by such persons only provided that they are members of the Association.

ARMY VETERINARY SERVICE

London Gazette—War Office—Territorial Army Reserve of Officers

Feb. 16th.—Maj. T. W. M. Cameron, T.D., from Active List, to be Maj. (Feb. 17th).

In Parliament

The following questions and answers have been recorded in the House of Commons recently:—

Remounts (Purchases, Ireland)

Mr. Hall-Caine asked the Financial Secretary to the War Office what was the number and value of Army remounts purchased from Northern Ireland and the Irish Free State, respectively, during 1933; what proportion of those from Northern Ireland came originally from the Irish Free State; and whether he intends still to rely upon Ireland rather than England, Scotland and Wales for the supply of Army horses?

Mr. Cooper: For the calendar year 1933, the number of remounts purchased from Northern Ireland was 494, and from the Irish Free State 168. In the former case the remounts purchased were chargers and troop horses, and the average cost was £60; in the latter case they were troop horses only, and the average cost was a little over £44. I am unable to say whether any of those purchased in Northern Ireland came originally from the Irish Free State. The policy of purchasing as many remounts as possible within Great Britain is being continued.

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Musk Rats

Mr. Burnett asked the Secretary of State for Scotland the amount of the grant made on the Department of Agriculture Vote, 1932-33, towards a biological investigation of the musk rat; and why it was decided that the investigation should take place at Oxford University and not at a Scottish university or institute of biological research?

Mr. Skelton: No provision was made on the Vote of the Department of Agriculture for Scotland for 1932-33, and no expenditure has been incurred by them for the purpose indicated. I understand that expenditure in connection with the biological investigation referred to is met by a grant from the Vote of the Ministry of Agriculture and Fisheries.

Mr. Burnett: Is it not the case that grants in connection with Oxford University are stated in the Appropriation Accounts?

Mr. Skelton: That question must not be addressed to me.

Mr. Henderson Stewart: May I ask if any success has attended this special investigation, which is rather important to Scotland?

Mr. Skelton: That question should be asked of the Minister of Agriculture.

Mr. Burnett: Is it not the case that biological research is specially engaged in in the Scottish Universities, particularly at Aberdeen?

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Wild Birds (Protection)

Mr. Alexander Ramsay asked the Home Secretary if his attention has been drawn to the serious losses of valuable homing pigeons by the depredations of the peregrine falcon and other birds of prey; and if he proposes that the protection now accorded to such birds be withdrawn?

Mr. Hacking: Representations on this subject have been made to the Home Office. The power of the Secretary of State to make local Orders under the Wild Birds Protection Acts withdrawing or otherwise varying the protection accorded to the peregrine falcon by those Acts, is exercisable only on application made to my right hon. Friend by the council of a county or county borough. The question is therefore one for consideration in the first instance by the appropriate local authority.

Notes and News

The Editor will be glad to receive items of professional interest for inclusion in these columns.

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DIARY OF EVENTS

Feb. 26th.—Meeting of the Editorial Committee, N.V.M.A., at 2, Verulam Buildings, Gray's Inn, W.C.1, at 4.30 p.m.

Feb. 27th.—Annual General Meeting of the Lancashire Division, N.V.M.A., at Liverpool.

Feb. 27th.—Meeting of the Dumfries and Galloway Division, N.V.M.A., at Carlisle.

Feb. 28th.—Meeting of the Southern Counties, Division, N.V.M.A., at Southampton.

Feb. 28th.—Meeting of the Comparative Medicine Section of the Royal Society of Medicine.

March 1st.—Meeting of the Central Division, N.V.M.A., at the Conway Hall, Red Lion Square, W.C.1.

March 9th.—Annual Dinner-Dance of the Yorkshire Division, N.V.M.A., at Leeds.

March 17th.—Annual General Meeting of the North of England Division, N.V.M.A., at Newcastle-on-Tyne.

July 30th-Aug. 3rd, 1934.—National Veterinary Medical Association Congress, Edinburgh.

Aug. 13th-18th, 1934.—Twelfth International Veterinary Congress, New York.

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PERSONAL

Presentation to Dr. L. Jordan.—On the occasion of his resigning his position as Veterinary Pathologist to the Hannah Dairy Research Institute, Dr. L. Jordan was presented with a handsome "grandmother" clock, suitably inscribed, from the farmers in the districts of Mauchline, Galston and Sorn. The presentation also included a personal gift for Mrs. Jordan.

Dr. Jordan is taking up duties as County Veterinary Officer for West Sussex.

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Appointment. — Mr. G. Durrant, B.V.Sc., M.R.C.V.S., D.V.H., Assistant Veterinary Officer, Durham County Council, has been appointed Chief Veterinary Officer of the Leicestershire County Council.

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On Leave.—We were pleased to receive a call at the N.V.M.A. offices, during the week, from Mr. Roderick McGregor, G.V.O., Pahang West, Raub, Federated Malay States. During his six months' leave of absence Mr. McGregor intends to visit various parts of the country and hopes to meet many old friends. In the meantime, letters will find him at "Kildrummie," Betchworth, Surrey.

R.C.V.S. OBITUARY

Quinn, Michael, 21, Montpelier Hill, Dublin. Graduated Edinburgh, May 22nd, 1888; died January 14th, 1934.

Sturdy, William, Herries Road, Sheffield. Graduated Edinburgh, May 30th, 1891; died February 13th, 1934, aged 65 years.

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SHEEP SCAB CONTROL CONFERENCE

"An extremely serious view of the prevalence of sheep scab in the Pennine Hills in five scheduled areas from Derbyshire to Cumberland was taken by Mr. P. J. L. Kelland, Chief Veterinary Officer of the Ministry of Agriculture, at a conference of representatives of the counties affected, held at the Education Offices, Leeds, yesterday," says *The Yorkshire Post* of February 15th.

"Mr. Kelland said that the position during the last 13 months had become far more dangerous, and that, of the 515 outbreaks of sheep scab in the country confirmed in that period, no fewer than 420 were in the Pennine Range area. That was a position unprecedented, and without comparison in the Ministry's history. Moreover, he was of the opinion that there were many centres of disease in the area not yet reported.

"The conference endorsed the proposition of the Ministry that five areas, stretching from Cumberland to Derbyshire, should be scheduled under an order prohibiting the movement of sheep except under licence, and the enforcement of double dipping of the sheep.

"Mr. Kelland announced that the order as to the movement of sheep in the five 'black areas' would be applied throughout at an early date, the double dipping order coming later. There was a long discussion as to the dates and periods for double dipping the sheep. Mr. Kelland warned the conference that it was no use thinking that they were going to get rid of sheep scab in one double dip. The conference decided that either August or September, according to the area, was the best time for the first double dip. A second would be necessary in November, said Mr. Kelland, and under the most favourable conditions it would be two and probably three years before the disease was wiped out.

"The conference passed an important resolution in favour of the appointment of patrol shepherds in all parts of the 'black areas,' where it was practicable, to keep a look out for all sheep suspected of having the disease.

"Mr. Kelland, supporting the resolution, said that he could not advocate it too strongly. It was absolutely essential to find out the centres where the disease existed, for the farmers did not always report it. Either veterinary officers or patrol shepherds had to do it. The employment of veterinary officers for such work was expensive, and he recommended a patrol shepherd who could go out and detect suspicious cases and then inform the veterinary officers, under whom he would work. This system had been extraordinarily successful in Wales, and, moreover, was popular with the farmers.

"Major D. S. Rabagliati, Chief Veterinary Officer for the West Riding, was in favour of having the patrol shepherds, though he emphasised the difficulty of getting the right type of man.

"The conference considered the question of the appointment of veterinary inspectors to examine the sheep and to supervise the double dipping. Mr. Kelland warned the conference that the supervision would have to be carried out by men appointed by the local authorities, and that they could not rely on help from the Ministry.

"The conference approved a new clause in the dipping order from the Ministry calling on sheep owners to send in a return describing their premises and holdings, the sheep on them, and the sheep brought into them."

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West Riding Dealer Fined £135

"From Derbyshire to Cumberland the countryside is becoming infested with sheep suffering from scab, and it is becoming a menace," said Mr. B. Kenyon, prosecuting on behalf of the County Council in a case at Snaith Petty Sessions, when fines totalling £135, the maximum amount, were imposed on Frank Froggatt, cattle dealer, of Sprotborough, Doncaster, for failing to notify cases of sheep scab. Twenty-seven sheep were involved.

Mr. Kenyon said the outbreaks necessitated the careful control of the flocks, and the Ministry had had to send additional veterinary surgeons to deal with the disease, while conferences will be held between the Ministry and local authorities. Everything possible was being done to eradicate sheep scab, and 90 per cent. of the farmers of the country observed and worked according to the order, but they were penalised by the remaining 10 per cent., who ignored the terms of the order.

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SIR WALTER GILBEY IN DEFENCE OF THE HORSE

Sir Walter Gilbey, speaking on Monday at the luncheon held in connection with the Fifty-fifth Annual Show of the Shire Horse Society, said that there was an increased demand for heavy draught horses of the best description. He advised farmers to invest what money they had in the breeding of horses. The horse, from an economical and practical point of view, was as essential as ever for transport in certain sections of industry, especially to small traders for short journeys and house-to-house deliveries, and under certain conditions it was vastly more economical than the motor.

The campaign in certain quarters for the abolition of the horse in the streets of London was unjustified, and if it were successful it would be grossly unfair to a great number of traders. The assertion that the horse was responsible for the holding up of traffic was all "moonshine." It was apparent to any careful observer that the congestion in their main thoroughfares was not caused by the horse traffic but was attributable mainly to all classes of heavy motors, since the percentage of horses in those thoroughfares was very small. If the persons who wished to abolish the horse from the streets had their way it would be a great blow to an industry on which thousands were dependent, directly and indirectly.

He was pleased that the Racecourse Betting Control Board had been able, through the "tote," to make a substantial contribution to the cause of horse-breeding. He was optimistic enough to believe from the beginning that the funds from the "tote" would be sufficient to assist horse-breeding, but opponents of the "tote" ridiculed this idea. It was true that it had been some time coming, but that was not the fault of the principle but owing to the fact that the "tote" was allowed to operate only on racecourses and not other centres. Evidence was given at the Royal Commission on Betting to the effect that 80 per

cent. of the turnover on betting took place away from the course, none of which benefited the "tote" in any way. He felt convinced that if the laws of the country had been altered to legalise ready-money betting within reasonable limits, horse-breeding and other worthy objects would now be receiving very considerable sums of money.

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THE CASE FOR THE RETENTION OF THE HORSE ON THE STREETS

Upon being re-elected Chairman of the Birmingham and Midland Chamber of Agriculture, at the annual meeting, Mr. Lawrence C. Tipper, M.R.C.V.S., dealt with the revival of the suggestions that horse-drawn vehicles should not be permitted on the streets.

There did not appear, he pointed out (says *The Birmingham Gazette*), to have been any thoughtful consideration given to the other side of the question, the effect on agriculture.

The removal of horses from the streets would be detrimental, particularly to that section of agriculture associated with the breeding and rearing of horses, and would further aggravate the depressed position of agriculture generally.

As to the general use of motors by farmers, in some respects the suggestion was like asking a man to cut his own throat.

Horses were essential to and more economical for most farm operations and materially helped the farmer to pay his rent.

It was gratifying to know that many traders were returning to horses, as for short distance journeys motors were less economic and more costly than horses. But for the unsatisfactory condition of our road surfaces the change back would have been still more rapid.

As an indication of the change back Mr. Tipper stated that records taken in a day of seven hours in London last summer showed that the number of horses drinking from 66 troughs had increased from 13,148 in 1932 to 14,533, or an increase of 1,385.

Whilst regulations of a reasonable nature regarding loading and unloading might be properly introduced in congested areas, people who suggested clearing horses off the streets should consider the resultant economic loss to agriculture.

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LONDON UNIVERSITY EXAMINATIONS IN VETERINARY SCIENCE

The Senate of the University of London, at a meeting on January 29th, adopted amended regulations for the Second Examination in Veterinary Science, Part II, in and after 1935, and for the B.Sc. (Vet. Sci.) Examination in and after 1937 for Internal Students. Copies may be obtained on application to the Academic Registrar.

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VETERINARIANS AS "OFFICERS OF ANIMAL HEALTH"

In the course of an address delivered at the Thirteenth Annual Convention of the Canadian Society of Technical Agriculturists, and reproduced in the February issue of *The Journal of the Ministry of Agriculture*, Sir Daniel Hall, Chief Scientific Adviser to the Ministry, stated that the question of animal disease had been the subject most pressed upon the Agricultural Research Council in Great Britain. It was the one that, to most people, seemed to require the most strenous effort, and many people considered that the most pressing of all the problems before them.

"I am bound to say," continued Sir Daniel, "while reporting this as the general opinion, I do not personally altogether agree, because I am looking at the problem from the point of view of health rather than of disease. I see the task of the people who are dealing with the health side of animals to be, in future, very much more hygiene and the maintenance of health than the cure of disease. What I would like to see is a class of veterinarians who are officers of animal health rather than practitioners. There must always be practitioners who are concerned with surgical cases and with specific illnesses of valuable animals, but it seems to me that the great efforts of the profession should be rather of a public nature. Instead of being called into this ailing cow, or that fretting horse, we want to see a class of men who have charge of a district, who are thinking about the horses, the cattle, the sheep and the pigs and how to keep disease away from them. Naturally, they will have to know about the endemic diseases, but breeding, environment, nutrition, and other factors in hygiene will be equally important. I think that is going to be the direction in which the veterinary profession itself will eventually move, and that the veterinarian of the future will be the kind of public officer who is taking prophylactic and preventive measures and who is studying problems like nutrition, and so forth, so as to ensure a greater amount of health amongst the animal population. It is only latterly that we have really begun to appreciate what an enormous factor nutrition is in the health of livestock; we do not even yet know all that is necessary."

Correspondence

Letters to the Editor should reach the Office not later than by the first post on Tuesday morning for insertion in following Saturday's issue.

All correspondence must bear the name and address of the contributor for publication.

The Editor does not hold himself responsible for the opinions of his correspondents.

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PAINLESS OPERATIONS ON ANIMALS

To the Editor of The Veterinary Record

Sir,—I think the time has arrived when the Anæsthetics (Animals) Act, 1919, should be revised so that no painful operation or process should be permitted to be carried out on any animal whether horse, cow, dog, cat, etc., unless it was rendered before-hand insensible to pain. If the humanitarian societies were approached by the N.V.M.A. I believe there would be no difficulty in getting the Act amended so as to bring it in line with the new German legislation.

Yours faithfully,

Henry Gray.

Kensington.

February 17th, 1934.

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CONCERNING LIEUT.-COLONEL DIXON'S LETTER IN *THE VETERINARY RECORD* OF FEBRUARY 17th

To the Editor of The Veterinary Record

Sir,—My letter of February 3rd entirely conforms to the recommendation of the Joint Committee of the N.V.M.A., *viz*: "(*b*) that the veterinary practitioner *shall* be incorporated in this service as well as the whole-time veterinary officer."

Lieut.-Colonel Dixon, in the discussion on that recommendation, says: "The matter was discussed fully, and the committee were unanimously of the opinion that the existing state of affairs *of cutting up the small veterinary profession into various sections* was to be deplored, and that they could only progress as a profession if they were *organised into one body.*"

Why this change of front? My letter asked: "Would it not be better for every veterinary surgeon to be enlisted for his own district, co-ordinated by a State Veterinary Service administered by veterinary surgeons?" The rest of the letter simply led up to this point. May I also point out that the letter was written on January 21st, that is, three weeks before the publication of the recommendation of the Joint Committee, of which I had no knowledge.

In my address to the Mid-West and South Wales V.M.A. on May 5th, 1933, and published July 1st, 1933, I said: "The main paragraph (of the Milk Reorganisation Commission's Report) I wish to criticise is: 'While we do not wish to disparage the work carried out by veterinary surgeons in private practice and employed part-time by local authorities, we are satisfied, *by evidence put before us*, that this work *should* be in the hands of officers employed whole-time by county or county borough councils.'" I asked later on in the address: "Who gave this evidence?" That question has never been answered.

Personally, I have never been antagonistic to the *borough* whole- or part-time veterinary inspector. In my May address I stressed this in the following paragraph: "I think we may leave out 'boroughs' in our consideration of inspections, as 132 whole- and part-time men inspect the 84,000 cows under this category—700 each—although this leaves 27,448 cows in 84 boroughs uninspected, but it would not be difficult to get 84 town practitioners to do this work (300 each)."

I hope, as I do not know the conditions existing in Yorkshire, that the late part-time inspectors and the general practitioners of that county will answer the grave charge implied in the words of Lieut.-Colonel Dixon's letter: ". . . if whole-time officers reply to such criticism, (when) it is to be feared, things will be said and written which cannot fail to be discreditable to the profession in general and to the part-time inspector in particular."

I have the honour to be, Sir,
Your obedient servant,
J. W. Hall Masheter.

Newnham-on-Severn.
February 17th, 1934.

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R.C.V.S. COUNCIL ELECTION

To the Editor of The Veterinary Record

Sir,—I shall be glad if you will be good enough to allow me to use your columns to thank Professor McCunn and Professor Macqueen for having chosen me as a candidate for election to the Council: also to permit me to ask for the support of the general practitioner and those who are alive to the very real menace to his existence—having a practice of my own, I know it only too well.

If I have the honour to be elected to the Council the grievances of those who are in practice will be my first consideration, and at all times those who record their votes in my favour may rest assured that my best endeavours will be for the general good interests of the profession.

Thanking you,
I am, Sir,
Yours faithfully,
Reg. F. Wall.

128, Queen's Road,
Bayswater,
London, W.2.
February 20th, 1934.

Diseases of Animals Acts, 1894 to 1927

SUMMARY OF RETURNS

Period.	Anthrax.		Foot-and-Mouth Disease.		Parasitic§ Mange.		Sheep Scab.	Swine Fever.	
	Outbreaks confirmed.	Animals attacked.	Outbreaks confirmed.	Animals slaughtered as diseased or exposed to infection.	Outbreaks reported by the Local Authorities.	Animals attacked.	Outbreaks confirmed.	Outbreaks confirmed.	Swine slaughtered.
	No.	No.	No.	No.	No.	No.	No.	No.	No.
Period 16th to 31st Jan., 1934	18	18	—	—	19	31	71	111	62
Corresponding period in									
1933	28	35	10	1,373	17	29	32	34	3
1932	20	26	1	67	14	17	27	90	42
1931	27	28	2	255	13	20	47	54	12
Total 1st January to 31st January, 1934	30	30	—	—	32	51	164	174	89
Corresponding period in									
1933	39	48	30	2,715	30	56	80	65	7
1932	38	51	1	67	27	37	56	189	70
1931	46	48	2	255	25	49	80	109	22

Note.—The figures for the current year are approximate only.

§ Excluding outbreaks in Army Horses.